NIH Award from the National Institute of Diabetes and Digestive and Kidney Diseases

Principal investigator: Bonnie Spring, preventive medicine, Feinberg School of Medicine

- Project: Engaged: E-Networks Guiding Adherence to Goals for Exercise and Diet
- Start Date: September 25, 2009
- Total Award Amount: $500,000

How the results of this project will benefit society:

Long in-person treatment with a professional is now necessary to maintain the adherence to diet and activity goals that is needed for successful weight loss. The ENGAGED study tests a way to reduce cost by having half as many in-person treatment sessions and using specially designed smart phones that help people engage virtually with a counselor and peers who support behavioral adherence to weight loss.

The problem the project is trying to solve:

The Diabetes Prevention Program (DPP) intensive lifestyle intervention is the gold standard weight loss treatment for adults with cardiometabolic risk factors. Despite its efficacy, the DPP has not been widely adopted, because its sixteen individual, face-to-face sessions with a specialist are considered too burdensome and expensive to be a sustainable program. Attempts to reduce cost by decreasing session number have yielded greatly diminished weight loss. Behavioral adherence to diet and activity goals declines and weight regain routinely begins once frequent face-to-face meetings cease. The still unmet challenge of DPP implementation is how to reduce treatment intensity without excising the regular social support, accountability, and feedback that are essential to maintain adherence.

How the project will work:

We hypothesize that it is feasible to implement DPP Intensive Lifestyle Treatment as effectively but twice as efficiently by using hand-held technology to preserve feedback, accountability, and regular social support. The smartphone-based technology system to be tested is guided by Carver and Scheier’s control systems theory of self-regulation. Initial formative research will upgrade the smartphone with engaging features that motivate participants to use the device to self-monitor and interact with a coach and peer support group. Use of the finalized tool will be compared to usual recording on paper records in a preliminary 2-group randomized controlled trial (RCT) involving 64 obese adults. By enabling peer support, accountability, and feedback on diet, physical activity, and weight loss goals continuously through the six-month intervention period, the ENGAGED system is expected to enhance (1) behavioral adherence (operationalized by (a) self-monitoring of diet and activity and (b) attainment of diet and activity goals), and (2) weight loss. An enabling technology that integrates specialist and peer support resources to improve treatment adherence could help to curtail the obesity epidemic by increasing the efficiency, feasibility, and reach of effective DPP lifestyle intervention.

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